

### **WHAT IS CLAIMED IS:**

1. A multi-stage DC/AC coupled impact force enhancing device of an electric nailer, comprising an AC power source, a half-wave rectifying circuit, a doubler rectifying filter circuit, a DC steady-state circuit, an AC  
5 phase sampling circuit, a phase start circuit, a switch start circuit, an impulse oscillation circuit, a decoding counting circuit, an energy-storage circuit, a solid-state switch circuit, and an electromagnetic coil.

2. The multi-stage DC/AC coupled impact force enhancing device of an electric nailer in accordance with claim 1, wherein the multi-stage DC/AC  
10 coupled impact force enhancing device applies a half-wave rectifying circuit principle to transform the voltage from the AC power source into a positive direction AC voltage which is coupled with a multi-stage capacitor energy-storage and solid-state switch circuit and is output from a final stage of the multi-stage capacitor energy-storage and solid-state switch circuit to  
15 discharge the voltage to the electromagnetic coil, thereby generating an enhanced impact force.

3. The multi-stage DC/AC coupled impact force enhancing device of an electric nailer in accordance with claim 2, wherein the amplitude of the positive direction AC voltage is about 90 to 180 degrees.